

CURRICULUM VITAE

NAME: Robert Allan Welch

PRESENT POSITION:

Deputy Director
SAIC-Frederick, Core Genotyping Facility
DCEG, NCI
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EDUCATION (INCLUDING DATES AND DEGREES OBTAINED):

- 1995 B.S., University of Scranton
1999 M.S., University of Maryland University College

PROFESSIONAL APPOINTMENT:

- 1992-93 Laboratory Technician, Beltsville Agricultural Research Center,
United States Department of Agriculture, Beltsville, MD
1992-94 Research Technician, Department of Biology, University of Scranton,
Scranton, PA
1995-99 Manager Sequencing Department, BioServe Biotechnologies Ltd., Laurel,
MD
2000-01 Laboratory Manager, Biognosis U.S., Inc., Gaithersburg, MD
2002-Pres. Deputy Director, SAIC-Frederick, Core Genotyping Facility, DCEG, NCI,
Gaithersburg, MD

PROFESSIONAL AFFILIATIONS:

American Society of Human Genetics
Association of Biomedical Research Facilities

EDITORIAL REVIEWS:

Cytokine

AWARDS AND HONORS:

- 2003 Best Poster Presentation, Association of Biomedical Research Facilities Annual Meeting

PROFESSIONAL ACTIVITIES/COMMITTEES:

- 2002 Technical Evaluation Panel, DCEG, NCI
- 2002-Pres. DCEG Repository Committee, DCEG, NCI
- 2003-Pres. Information Technology Oversight Committee, DCEG, NCI
- 2004 Molecular Epidemiology Course, DCEG, NCI

INVITED LECTURES:

- 2002 “Core Genotyping Facility (CGF) Assay Development, Validation and Bioinformatics”, Sequenom Users Group Meeting, NHGRI, Rockville, MD
- 2002 “High-Throughput Genotyping Using the MGB EclipseTM Probe System Validated by the SNP500Cancer Informatics Pipeline”, American Society of Human Genetics, Amersham Biosciences Seminar, Baltimore, MD
- 2002 “Core Genotyping Facility: General Strategy, Goals and Methodology: Experience with Different SNP Detection Platforms”, Epoch Biosciences, Bothel, WA
- 2003 “The National Cancer Institute’s Core Genotyping Facility (CGF): Approaching a Gold Standard in Genotyping Assay Validation”, Association of Biomolecular Resource Facilities Annual Meeting, Denver, CO
- 2003 “Implementation of a High Throughput Sequencing System in the Core Genotyping Facility (CGF) Sequencing Pipeline”, Applied Biosystems Genomic Seminar Series, Bethesda, MD
- 2003 “SNP500Cancer Project-Genotyping Cancer Gene SNPs”, Real-time Applications for DNA Analysis, 2003 Seminar, Boston, MA

- 2003 "Assessing the Validity of Genotyping in Association Studies: Resequencing Candidate Genes for Study", Epoch Biosciences, Bothel, WA
- 2003 "DNA Quantification and Sample Handling", Workshop on Specimen Processing for Molecular Epidemiology Studies, Rockville, MD
- 2004 "Introduction to Molecular Methods-DNA and RNA Extraction, quantification, Aliquoting, DNA Quality Evaluation, WGA", Molecular Epidemiology Course, DCEG, NCI, Rockville, MD
- 2004 "High-Throughput Genotyping and DNA Sequencing to Support Genetic Analysis for a Broad Range of Intramural Research Projects Conducted in the Division of Cancer Epidemiology and Genetics and the Center for Cancer Research", Westat, Rockville, MD
- 2004 "Use of the CGF Web Site for Entering and Tracking Genotyping Requests", DCEG Seminar Series, Rockville, MD
- 2004 "Bioinformatics Tools Workshop", Basic Research Program 2004 Retreat, SAIC Frederick, Annapolis, MD

JOURNAL ARTICLES:

1. Bergen AW, van den Bree MBM, Yeager M, Ganjei JK, Welch R, Haque K, Bacanu S, Berrettini WH, Grice DE, Bulik CM, Fichter M, Halmi K, Kaplan A, Strober M, Treasure J, Woodside B and Kaye WH. Candidate Genes for Anorexia Nervosa in the 1p34-36 Linkage Region: Both Serotonin 1D and Delta Opioid Receptors Display Significant Association to Anorexia Nervosa. *Mol Psychiatry* 8:397-406, 2003
2. Bergen AW, Yeager M, Welch R, Ganjei JK, Deep-Soboslay A, Haque K, van den Bree MBM, Goldman D, Berrettini WH, Kaye WH and the Price Foundation Collaborative Group (www.anbn.org). Candidate Gene Analysis of the Price Foundation Anorexia Nervosa Affected Relative Pair Dataset. *Curr Drug Targets CNS Neurol Disord* 2:41-51, 2003.
3. Castle PE, Garcia-Closas M, Franklin T, Chanock S, Puri V, Welch R, Rothman N and Vaught J. Effects of E-Beam Irradiation on Buccal Cell DNA. *Am J Hum Genet* 73:646-651, 2003.
4. Hughes AL, Packer B, Welch R, Bergen A, Chanock SJ, and Yeager M. Widespread Purifying Selection at Polymorphic Sites in Human Protein-Coding Loci. *PNAS* 100:15754-15757, 2003.

5. Belousov Y, Welch RA, Sanders S, Mills A, Kulchenko A, Dempcy R, Afonina IA, Walburger DA, Glaser Cl, Yadavalli S, Vermeulen NMJ and Mahoney W. Single Nucleotide Polymorphism Genotyping by Two Colour Melting Curve Analysis Using the MGB EclipseTM Probe System in Challenging Sequence Enviroment. *Human Genomics* 1:209-217, 2004.
6. Packer BR, Yeager M, Staats B, Welch R, Crenshaw A, Kiley M, Eckert A, Beerman M, Miller E, Bergen A, Rothman N, Strausberg R and Chanock SJ. SNP500Cancer: a Public Resource for Sequence Validation and Assay Development for Genetic Variation in Candidate Genes. *Nuc Acids Res* 32:D528-532, 2004.
7. Bonner MR, Rothman N, Mumford JL, Zingzhou H, Shen M, Welch R, Yeager M, Chanock S, Caporaso N, Lan Q. Green Tea Consumption, Genetic Susceptibility, PAH-rich Smoky Coal, and the Risk of Lung Cancer. *Mutation Res*, 582(1-2):53-60, 2005.
8. Bergen AW, Qi Y, Haque k, Welch RA, Garcia-Closas M, Chanock SJ, Vaught J and Castle PE. Effects of Electron-beam Irradiation on Whole Genome Amplification. *Cancer Epidemiol Biomarkers Prev*,14(4):1016-1019, 2005.
9. Hughes AL, Packer B, Welch R, Bergen AW, Chanock SJ and Yeager M. Effects of Natural Selection on Inter-population Divergence at Polymorphic Sites in Human Protein-Coding Loci. *Genetics*, In Press, 2005.
10. Shen M, Rothman N, Berndt S, DeMarini DM, Mumford JL, He Z, Bonner MR, Tian L, Yeager M, Welch R, Chanock S, Zheng T, Caporaso N, Lan Q. Polymorphisms in the DNA Nucleotide Excision Repair Genes and Lung Cancer Risk in Xaunwei, China. *Int'l J Cancer*, In Press, 2005.
11. Shen M, Rothman N, Berndt SI, He X, Yeager M, Welch R, Chanock S, Caporaso N, Lan Q. Polymorphisms in the folate metabolic genes and lung cancer risk in Xuan Wei, China. *Lung Ca*, Epublish, 2005.
12. Lan Q, Mumford JL, Shen M, Bonner MR, He X, Yeager M, Welch R, Chanock S, Tian L, DeMarini DM, Chapman RS, Zheng T, Keohavong P, Caporaso N, Rothman N. Genetic Polymorphisms in the Oxidative Damage-related Genes *AKR1C3* and *OGG1*, Exposure to Indoor Smoky Coal Emissions, and Risk of Lung Cancer in Xuan Wei, China. *Cancer Res*, In Press, 2005.

13. Garcia-Closas M, Malats N, Silverman D, Dosemeci M, Logevinas M, Hein DW, Tardon A, Serra C, Carrato A, Garcia-Closas R, Lloreta J, Castano-Vinyals G, Yeager M, Welch R, Chanock S, Chatterjee N, Wacholder S, Samanic C, Tora M, Fernandez F, Real FX, Rothman N. NAT2 Slow Acetylation and *GSTM1* Null Genotypes Increase Bladder Cancer Risk: Results from the Spanish Bladder Cancer Study and Meta-analysis. *Lancet*, In Press, 2005.
14. Lan Q, Shen M, Berndt SI, Bonner MR, He X, Yeager M, Welch R, Keohavong P, Donahue M, Hainaut P, Chanock S. Smoky Coal Exposure, *NBS1* Polymorphisms, p53 Protein Accumulation, and Lung Cancer Risk in Xuan Wei, China. *Lung Ca*, Epublish, 2005.
15. Zhang M, Ardlie K, Wacholder S, Welch R, Chanock S, O'Brien TR. Genetic Variations in CC Chemokine Receptors and Hypertension. *J Hypertension*, In Press, 2005.

Papers under review:

1. Bergen AW, Yeager MA, Welch RA, Haque K, Ganjei JK, Mazzanti C, Nardi I, van den Bree MBM, Massanti C, Nardi I, Fichter MM, Halmi KA, Kaplan AS, Strober M, Treasure J, Woodside DB, Bulik CM, Bacanu SA, Devlin B, Berrettini WH, Goldman D, Kaye WH. Association of Multiple DRD2 polymorphisms with Anorexia Nervosa. *Neuropsychopharmacology*, In Press, 2005.
2. Zhang M, Ardlie K, Wacholder S, Welch R, Chanock S, O'Brien TR. Genetic Variations in CC Chemokine Receptors and the Prevalence of Hypertension in a Large Population Study. *Hypertension*, In Submission, In Submission, 2005.
3. Moore LE, Huang WY, Chatterjee N, Gunter M, Chanock S, Yeager M, Welch B, Pinsky P, Weissfeld J, Hayes RB. Risk of Advanced Colorectal Adenoma Associated with *GSTM1*, *GSTT1*, and *GSTP1* Polymorphisms and Cigarette Smoking in the Prostate, Lung, Colorectal, and Ovarian (PLCO) Cancer Screening Trial. *Cancer Epidemiol Biomarkers Prev*, In Submission, 2005.
4. García-Closas M, Malats N, Silverman D, Dosemeci M, Kogevinas M, Hein DW, Tardón A, Serra C, Carrato A, García-Closas R, Lloreta J, Castaño-Vinyals G, Yeager M, Welch R, Chanock S, Chatterjee N, Wacholder S, Samanic C, Torà M, Fernández F, Real FX, Rothman N. NAT2 Slow Acetylation and *GSTM1* Null Genotypes Increase Bladder Cancer Risk: Results from the Spanish Bladder Cancer Study and Meta-analysis. *Lancet*, In Submission, 2005.

5. Bergen AW, Qi Y, Haque KA, Welch RA, Chanock SJ. Effects of DNA Mass on Multiple Displacement Whole Genome Amplification and Genotyping Performance. *BMC Biotechnology*, In Submission, 2005.

ABSTRACTS:

1. Welch R, Yeager M, Yadavalli C, Glaser S, Larson B, Packer E, Miller M, Kiley M, Burke A, Crenshaw A, Bergen AW and Chanock SJ. Comparative Analysis of High-Throughput Genotyping Methods. 3rd International Meeting on Single Nucleotide Polymorphism and Complex Genome Analysis, 2002, Reykjavik, Iceland.
2. Welch R, Yeager M, Staats B, Beerman M, Packer B, Hutchinson A, Bergen AW, Bandey T, Chowdhury S, Crenshaw A, Yadavalli S, Sicotte H, Miller E, Kiley M and Chanock SJ. The National Cancer Institute's Core Genotyping Facility (CGF): Approaching a Gold Standard in Genotyping Assay Validation. ABRF 2003 Meeting Translating Biology of Human Genetics, 2003, Los Angeles, CA.
3. Welch R, Yadavalli S, Puri V, Rothman N, Chanock SJ and Yeager M. A High-Throughput, Real-Time PCR (Taqman®) Method for Detecting the Heterozygous State for GSTM1 and GSTT1 Deletion Alleles. 53rd Annual Meeting of The American Society of Human Genetics, 2003, Los Angeles, CA.
4. Welch R, Yeager M, Packer B, Miller E, Kiley M, Burke M, Strausberg R, Rothman N and Chanock SJ. SNP500Cancer Database and Candidate SNP Approach to Genetic Association Studies. 4th International Meeting Single Nucleotide Polymorphism and Complex Genome Analysis, 2003, Chantilly, VA.
5. Welch R, Yeager M, Crenshaw A, Packer B, Eckert A, Burdett L and Chanock SJ. The Importance of Sequence Context in SNP Genotyping Assay Design and Performance. 54th Annual Meeting of The American Society of Human Genetics, 2004, Toronto, ON.